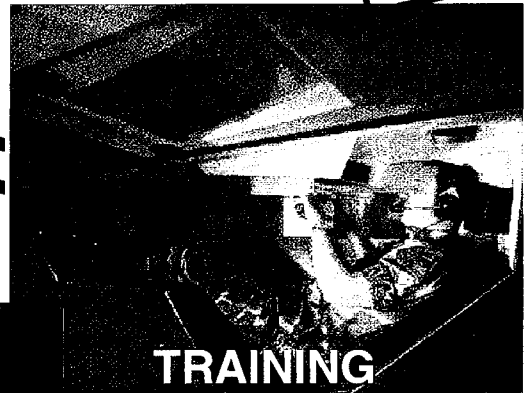


# TRAINING AND DOCTRINE COMMAND

## 3 QTR - FY94 UPDATE

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TRADOC... WHERE TOMORROW'S VICTORIES BEGIN

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## GENERAL FREDERICK M. FRANKS, JR.

COMMANDER  
U.S. ARMY TRAINING AND DOCTRINE COMMAND

This is a pivotal time for the Army and the Training and Doctrine Command. Momentous changes in the strategic landscape, changes in our nation, and changes to our force structure present challenges and opportunities for all of us to accomplish the missions required of the U.S. Army. The business of TRADOC is to meet these challenges by identifying, developing, and fielding capabilities which are the right combinations of Doctrine, Training, Leader Development, Organizations, and Materiel to support our Soldiers. Following are some of the Army/TRADOC initiatives that will impact on the Army, our soldiers, and organizations in the not too distant future.

# DOCTRINE



*The Army's doctrine lies at the heart of its professional competence. It is the authoritative guide to how Army forces fight wars and conduct operations other than war. Never static, always dynamic, the Army's doctrine is firmly rooted in the realities of current capabilities. At the same time, it reaches out with a measure of confidence to the future. Doctrine captures the lessons of past wars, reflects the nature of war and conflict in its own time, and anticipates the intellectual and technological developments that will bring victory now and in the future.*

## ARMY DOCTRINE

**FM 71-1, Tank and Mechanized Infantry Company Team:** U.S. Army Armor Center is lead for this manual. Revised FM 71-1 will provide tactics, techniques and procedures for the M1A2 and Bradley digitized company/team. It will refine mission profiles and provide TTP for heavy/light link-up and operations with task force scout platoons. Data collection is ongoing; manual revision is programmed to begin upon completion of FM 71-3 (1QTR95).

**FM 71-2, The Tank and Mechanized Infantry Battalion Task Force:** U.S. Army Infantry School is lead for this manual. The revised FM 71-2 will incorporate new Army doctrine reflected in the 1993 version of FM 100-5. The focus of this manual will be warfighting with considerations for operations other than war. Draft outline will be published 4QTR94. It will provide TTP for employment of force as they exist and will provide annexes for digitization of the tank and mechanized infantry battalion task force.

**FM 71-3, Armored and Mechanized Infantry Brigade:** U.S. Army Armor Center is proponent for this manual. They are writing it in concert with U.S. Army Infantry Center and School. The latest version of FM 71-3 incorporates new Army doctrine reflected in the 1993 edition of FM 100-5. The focus of this manual is warfighting with emphasis on digitization of the brigade. The manual will also include doctrine and tactics, techniques and procedures for armored and mechanized brigades in conducting operations other than war. (To be published 2QTR95.)

**FM 100-5, Operations:** The latest version of 100-5 was published last year on the Army's 218th birthday, June 14, 1993. As the Army's keystone manual, it focuses on warfighting, yet it addresses the full range of conditions within which the Army will operate. TRADOC has developed and fielded an education package containing teaching points on new concepts as they

pertain to illustrated historical examples used in FM 100-5. The education package contains a CD-ROM disk, 35mm slide presentation, and video tape. Distribution has been made to division level with sufficient copies for each brigade-size unit.

**FM 100-6, Information Operations:** Will be the Army's capstone manual on how to win the information war in military operations now and into the 21st century. It identifies information as an essential element of military power at the strategic, operational, and tactical levels. It also defines the ways in which information will impact joint, combined multinational, or interagency operations. It addresses the framework that will enable a commander to influence available information, protect his ability to sense, process, integrate, decide, act on that information, and attack his adversary's ability to do the same. (To be published 4QTR94.)

**FM 100-7, Decisive Force: The Army in Theater Operations:** The Army's capstone manual for conducting operational level activities linking tactical level actions to theater objectives. This manual describes the requirement for the Army Service Component (ASC) to perform the three strategic and operational-level roles: establish joint, combined, interagency, nongovernmental agencies, and private voluntary organization linkages; conduct support operations; and conduct operations. (To be published 4QTR94.)

**FM 100-8, Combined Army Operations:** Will be the Army's capstone manual for conducting combined operations with allied or coalition forces. This manual addresses combined Army command relationships and leadership considerations. Factors affecting combined planning and possible coalition alliance command structures are examined in FM 100-8. Also included are functional considerations for the combined commander at the operational and tactical levels. (To be published 4QTR94.)

**FM 100-15, Corps Operations:** The new FM 100-15 will bring corps doctrine in line with current Army doctrine. The central focus of the manual will be warfighting and will also address force projection operations in war and operations other than war. FM 100-15 will also address the structure of the battlefield and battle command of the corps. Finally, it will delineate battlefield responsibilities in the joint environment, to include operations as a JTF/ARFOR headquarters. (Initial draft to be published 4QTR94.)

**FM 100-16, Army Operational Support:** Addresses operational level logistics and support - CONUS through theater level. It specifically addresses logistics functions and organizations; command and control; soldier services; combat health service support; engineer support; military police support; civil affairs; psychological operations; rear area operations; and NBC. FM 100-16 also reflects the current Army focus on contingency operations and force projection. (To be published 4QTR94.)

**FM 100-17-1, Army Pre-positioned Afloat:** Addresses the idea of pre-positioning equipment and support for a heavy brigade on board ships. The doctrine included in this manual describes the planning considerations and procedures required by a brigade commander to execute the pre-positioned afloat mission. Included are discussions on drawing and securing brigade equipment;

movement through the port area to a tactical assembly area; and preparations for follow-on missions. (To be published 4QTR94.)

**FM 100-18, Space Support to Army Operations:** Will be the Army's capstone manual on how to use space system capabilities to enhance mission accomplishment across the full range of military operations, to include operations other than war. It emphasizes enhancements offered by space systems in communications, strategic defense, position and navigation, reconnaissance, intelligence, surveillance, and target acquisition (RISTA), and weather and environmental monitoring. This manual provides a foundation for leader development, training, and space-related modernization initiatives that support the Force Projection Army's missions and provides soldiers with a decisive advantage worldwide. It is relevant from the highest levels of command to the soldier in the foxhole. (To be published 4QTR94.)

**FM 100-19, Domestic Support Operations:** Describes the concept, interface, and process of providing Army assistance to U.S. civil authorities. It serves as a reference for service and professional military education and includes mandated and legislated requirements. It includes considerations and principles for command and staff planning and execution. FM 100-19 incorporates lessons learned from numerous operations and recognizes the requirements dictated by the National Military Strategy. Coordination with DA staff, TRADOC, MACOMs, CINCs, joint staff, and federal, state, and local governmental agencies is being conducted to ensure harmonized actions. Finally, this manual emphasizes the linkages of interagency operations and missions. (Published 4QTR93.)

**FM 100-23, Peace Operations:** Provides guidance to commanders for conducting the full range of missions in support of international peacekeeping and peace enforcement efforts. This manual addresses the special requirements of peacekeeping operations, including force composition, command and control, and intelligence requirements. It also reviews the unique operational environment of peace operations, including legal aspects of United Nations and non-United Nations operations as well as the requirement for operations in the interagency arena and with joint and combined forces and nongovernmental organizations. (To be published 4QTR94.)

**FM 71-100, Division Operations:** Addresses tactical operations of the division in war. Focus is on division deployments and war fighting. It will apply new concepts addressed in FM 100-5 to division operations. The new FM 71-100 will be integrated both vertically and horizontally with recently written field manuals such as FM 101-5, Battle Command for Commanders and Staff; and TTP manuals FM 71-100-1, Armor and Mechanized Division Operations; FM 71-100-2, Infantry Division Operations; FM 71-3, The Armored and Mechanized Brigade; and FM 7-30, the Infantry Brigade. (Initial draft due out 4QTR94.)

## **JOINT DOCTRINE IMPLEMENTATION**

TRADOC has written eight joint publications which the joint staff has approved and published. The most significant of those is **JP 3-0, Doctrine for Joint Operations**. It is the joint keystone operations equivalent of FM 100-5 and affects most other important pubs in the joint system. (Published 4QTR93.)

**JP 3-07, Joint Doctrine for Operations Other Than War:** Expands the discussions in JP 3-0 of the principles and considerations associated with joint operations below the level of large scale, sustained combat operations. (To be published 4QTR94.)

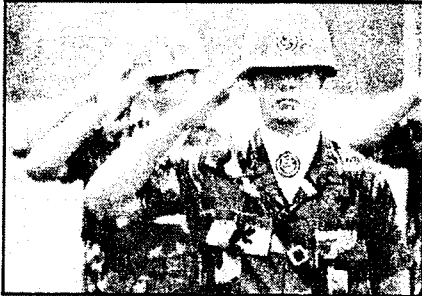
**JP 3-09, Doctrine for Joint Fire Support:** Clarifies relationships and responsibilities for those fires that assist land and amphibious forces to maneuver and control territory, populations, and key waters. Included are discussions on issues such as FSCL, Joint Targeting Coordination Board (JTCB), and relationships between air, land, and sea components. (To be published 4QTR94.)

#### **FUTURE DOCTRINE - TRADOC PAM 525-5**

The scope and pace of change today requires the Army to stay ahead doctrinally. We think we know enough about the future to act now. Therefore, we are working several future doctrine initiatives, principal among them is TRADOC Pam 525-5. Tentatively titled **Future Full-Dimensional Operations**, this version of 525-5 is unlike previous pamphlets. It is more conceptual and it is intended to be a living document, designed to stimulate thought, sharpen focus, and generate discussion on future joint land operations. The concept looks at the impacts of strategic change and revolutionary advances in information technology. TRADOC Pam 525-5 has two central themes: first, that coexisting hierarchical and nonhierarchical command information systems will enable battlefield coherence through shared knowledge vice physical means; and second, that common, relevant, situational awareness will fully advantage capabilities of commanders, soldiers, and weapons technology. (3d version to be published 4QTR94.)

# TRAINING

## Institutional



## Units



## Self-Development



*Our challenge is to maintain the essence of our education and training system, the Army University, not the pieces. This means a quality school system, but not necessarily at the current locations. Our training strategy must utilize the best combination of live, virtual, and constructive simulations and simulators. This strategy must unite the many ongoing efforts into a clear, coherent vision to produce trained and ready units in the environment of the next century. Some of our efforts in that direction follow:*

**Military Training Structure Review:** The Joint Chiefs of Staff directed a review of interservice training to eliminate duplication and create savings across all combat service support, combat service, and combat functional areas. FY 93 achievements resulted in the consolidation of Calibration Training at Keesler Air Force Base and the consolidation of Helicopter Maintenance Training at Ft. Eustis. FY 94 will see decisions concerning consolidation of Motor Vehicle Operator Training at Ft. Leonard Wood, Food Service Training at Ft. Lee, and Welder Training at Aberdeen Proving Ground.

**Future Army Schools 21 (FAST):** FAST has transitioned into the Total Army School System Coordination Activity (TASSCA). Their future goal is a school system that makes the component of the institution and the instructor transparent to the student; oversees the Region C Pilot now underway through FY 95 for evaluation; impacts all proponents through the functional alignment process; affects Forts Bragg, Jackson, Benning, Gordon and Stewart. The RC has established six Regional Brigades, each responsible for a functional area: Combat, Combat Support, Combat Service Support, Leader Development, Officer Education, and Health Services. Bottom line is for instruction to include a common curriculum across component boundaries.

**Distance Learning:** The application of Multiple Means and emerging technologies to deliver standardized training (Individual, Collective, and Self Development) at the right place and the right time. It is being applied to a full range of Terminal Learning Objectives, for both leadership as well as technical skills. Multimedia applications include Video Teletraining, Computer Based



Instruction, Asynchronous Computer Teleconferencing, Video Tape, and Paper Based Training Products. Initial applications of this new technology can be found in the Region C - FAST Pilot Program (FY 94-95), 19 CMF Training for the RC at Ft. Knox, 13 CMF Training for the RC at Ft. Sill, NCOES Enhancement for the RC at Ft. Bliss, and Language Sustainment Training at DLI.

**Training Aids, Devices, Simulations, and Simulators (TADSS):** The fielding of simulated weapons effects to the Combat Training Centers will provide a new dimension and challenge commanders in the synchronization of fire support and the full use of area weapons in combat multipliers. You will soon see the fruits of our labor with JANUS - the Army's Battle Focus trainer (fielding ongoing). It supports PLT and CO levels in the application of tactical doctrine and principles of combat. At battalion and brigade levels the focus is on battlefield synchronization and the coordination of maneuver and fires. Sight Video, being fielded for Abrams and Bradley in the last quarter of FY 94, provides feedback for gunnery and MILES AAR's. GUARDFIST II replaces the Training Set Fire Observation in training observed fire procedures (projected fielding 4QTR94). Stinger Tactical Proficiency Trainer is currently being fielded and will provide ADA Stinger crew training in garrison and field.

**International Observer/Controllers at JRTC:** All recent experiences in warfare have been coalitions and will be in the future. The goal now is to acquire officers from foreign countries with unique experiences and niches. Examples of areas under consideration include OOTW and jungle warfare. Currently, there is one British Officer on the ground and one Australian en route. This inclusion will make for a more realistic battlefield by introducing a foreign flavor.

**Operations Group Delta - JTF Training:** The standing up of this dynamic organization will ensure we have the capability to provide training to Corps and Divisions on how to act as a nucleus for a Joint Task Force or as an Army component within a JTF. This training is currently being provided through an ad hoc organization within the BCTP. If the CSA approves the concept, we will have a fully manned Operations Group by the end of FY 94. Exercises planned for FY 94 include ACOM/XVIII Corps - AGILE PROVIDER; PACOM/I Corps - TEMPO BRAVE; CGSOC - PRAIRIE WARRIOR; and EUCOM/V Corps - REFORGER.

# LEADER DEVELOPMENT



*"Today's Army is growing into the future precisely because we have invested the time, money, human ingenuity, and hard work in leader development over nearly two decades. As we grow we must retain the essence of our leader development process - its warfighting focus. The basics must come first: troop leading procedures; the command estimate process; and intelligence preparation of the battlefield, to name a few." These thoughts from GEN Sullivan will focus our efforts in the future. We will strive to maintain the finest leader development system in the world in all areas. Some key initiatives are:*

**Combined Logistics Officer Advanced Course:** This CASCOM initiative has consolidated the Officer Advanced Courses for Transportation Corps, Army Medical Department, Quartermaster, Ordnance, Aviation Logistics, and the Materiel Management Course. This course runs for 7 weeks at Ft. Lee followed by 5 weeks at the officer's Regimental school for training in his/her specialty. The officers then return to Ft. Lee for the final 8 weeks of the course. Proponent for this school is located at Ft. Lee and graduated its first class of 48 students on 23 Mar 94. The objective of the course is to provide captains with the training needed to perform company-level command and staff duties within TO&E units and multifunctional staffs. You will see evaluations in the field in the near future.

**Nine-Month Sergeants Major Course:** This expanded course begins in Aug 95 and will provide warfighting and logistics instruction equal to the demands of a Force Projection Army. This year marks the first Sergeants Major Academy class to complete the entire NCOES program, from PLDC through Sergeants Major Academy. Sergeants Major will be trained in a state-of-the-art facility and will be ready to meet any challenge.

**Officer Leader Development:** School of Advanced Military Studies began its first class with six Army students in the Advanced Operational Art Study Fellowship in Jul 93. The first graduates from this 30-month course will be available to the field in Dec 95. A new class begins each year and gives these officers MEL1 credit after they complete the first year. This year also marks the first CGSOC class with almost all CAS3 graduates, completing the education cycle.

**Self Development Test:** This test, which replaces the Skill Qualification Test, supports all three pillars of leader development. The AC began taking the SDT for record this year; the RC begins in FY 95. Ninety-four percent of all soldiers SGT through SFC are covered by the SDT in FY 94. Test schedule is published in DA CIR 350-94-1. Commanders play a key role by mentoring, ensuring availability of study references, and using the results in local promotion boards to determine points for duty performance. Commanders are essential for the success of this new program.

# ORGANIZATIONS



*We have observed through constructive and virtual simulation that significant increases in lethality, survivability, and tempo are possible in existing organizations using current doctrine when digital communications are integrated horizontally and vertically across combined arms teams.*

**Force XXI:** The Force Projection Army of the 21st century, from foxhole to factory, capable of land force dominance by leveraging the power of people, information, and technology. This effort will initially focus at the division level, but will branch up and down covering all echelons of the force. We will use a combination of constructive, virtual, and live simulations in warfighting experiments aimed at building a force capable of leveraging information-age operations to overmatch the enemy in lethality, survivability, and tempo of operations. We will examine the full range of doctrine, training, leader development, organizations, materiel, and soldiers across all battlefield operating systems and at every echelon to optimize our capabilities for the future. We plan to operate on two axes. The main effort is a joint venture between TRADOC, AMC, FORSCOM, and others to develop the concepts and organizations of the information age force. The supporting effort is the Army Digitization Office, acquiring and assimilating the technology to enable those concepts and organizations. The Louisiana Maneuvers Task Force will synchronize these two efforts.

**Advanced Warfighting Experiment:** Operation DESERT HAMMER VI/DESERT CAPTURE II was conducted at the NTC in Apr 94. TF 1-70 Armor from Ft. Knox determined, measured, and analyzed the lethality, survivability, and tempo of operations using real soldiers in a realistic, tactically competitive environment. Our goals were to leverage existing technologies to increase lethality, survivability, and tempo by digitally linking all the battlefield operating systems of the task force. The insights resulting from this experiment, including doctrine/TTP, training methodologies, and organizations will be used as a waypoint for follow-on efforts to design Force XXI. These results were grouped into three "Baskets": 1. Good - implement now. We are implementing changes based on the results today. 2. Marginal - do more evaluation. This result is worthy of further study. 3. Bad - drop now. The operation verified this methodology and proved that units can train and do experimentation at the same time.

**New Organization Design for the Armored Cavalry Regiment:** The 2d ACR is a force projection organization, designed for rapid deployment with global utility. It has operational and tactical utility and can be effectively deployed in mature and austere theaters. It contains an appropriate mix of air/ground forces; is rapidly deployable by air; has a self-contained CSS capability, high tactical mobility, and all weather capability; and has the ability to employ long-range division, corps, and joint fires. The 2d ACR consists of three CAV squadrons with three CAV troops each; the troops consist of two HMMWV Scout and two HMMWV-TOW pure platoons. These platoons can be task-organized based on METT-T requirements, and eventually the HMMWV TOW will be replaced by the Armored Gun System (AGS). This organization also includes a regimental AVN Sqd (MPLH), EN, MI, CM, ADA units, and a support battalion. Current systems include HMMWV, 155mm towed, MPLH, Avenger, ACE, and Volcano. Modernization systems include AGS, UAV, Comanche, and Javelin. This force will be a premier cavalry organization with light equipment and will be used to complement other Early Response Forces. Activated Aug 93.

**Heavy Division CAV Squadron Redesign:** New design added third ground troop (3-ground, 2-air), adds 27-M1A1/2 tanks, 41-CFV, 8/12 AH-1/OH-58, 2 per troop-4.2/120mm mortars. Created pure tank and CAV platoons (2 each); new concept will allow the commander to mix and match capabilities to respond to varied METT-T situations. Simplifies training and leader development (single weapon system units).

**DISCOM Redesign Initiative:** Standardized the organization of all light division DISCOM's with the heavy division DISCOM. This redesign improves C2 flexibility and provides a one-stop CSS support capability for combat units. The organization consists of an HHC/MMC, a MSB, and three FSB's containing the maintenance, transportation/supply, and medical support assets. The ABN/ASLT/LID DISCOM will provide DS and limited GS support to all divisional units and will be supported by the Corps ASG. This new organization has recently been implemented.

**Aviation Restructure Initiative (ARI):** Standardizes the Army aviation structure. It involves a total relook/redesign of Army aviation to realign aviation units/organizations with the reduction in force structure. The initiative standardizes ASLT/ATK Companies, provides a separate AVN SPT BN in heavy divisions within the DISCOM, forms a general AVN SPT BN, creates homogeneous (single aircraft) organizations, fixes aviation sustainment weakness, and retires old aircraft. This initiative is currently being implemented.

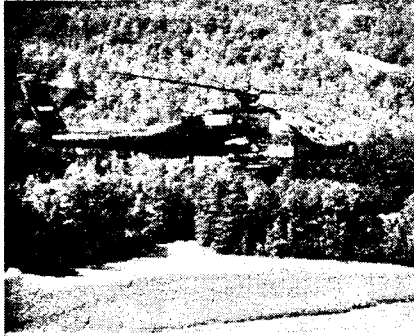
**MI Restructure Initiative:** New design leverages national and theater assets and creates a seamless downward/focused capability. It improves responsiveness to commanders (near real time) and balances intelligence functions. As a result of this initiative, structures are more tailorable and better support split base operations. All source dissemination through ASAS (graphics, data, etc.) common ground stations will increase common view/understanding of a seamless battlefield.

**Echelons Above Corps (EAC) and Division Redesign:** A holistic review of the force. It focuses on echelons other than division/echelons other than corps (EOD/EOC) in order to validate or redesign the current organization and force structure to fit the range of missions for the Force Projection Army. The intent is to more effectively and efficiently accomplish strategic and tactical force packaging and provide for better identification of minimum mission essential wartime requirements (MMEWR). We have conducted two TRADOC-wide reviews and have identified those units/organizations that do not fit the force projection mold and consequently need to be changed or redesigned. Proponents are currently in the process of aligning organizations with new doctrine (FM 100-5, FM 100-7) with the goal being to begin implementation of redesign efforts in the ongoing TAA-03 and to be completed by TAA-05.

**The Mobile Strike Force (MSF):** A constructive simulation experiment designed to build a land combat force that uses organizational, materiel, and operational concepts derived from TRADOC Pam 525-5 (Future Full Dimensional Operations) in order to significantly increase lethality, survivability, and the tempo of land combat in the 21st century. We will wargame this force through the CGSOC student BCTP exercise Prairie Warrior, using leaders who will be the senior leadership of the Army when such a force might be fielded. Insights across DTLOMS will be derived to feed Force XXI design efforts.

The MSF experiment is being conducted using a student elective course staff to portray the staff of a fully digitized, modernized, post 1998 force of about division size. The MSF will fight in the competitive box against the BCTP World Class OPFOR, resulting in insights across the full range of DTLOMS. After Prairie Warrior, constructive modeling will be used to simulate alternative organizations, future technologies, doctrine/TTP, and Battle Command processes out to the year 2010. All MSF insights will serve as input to future force design and doctrine for Force XXI.

# MATERIEL



*Continued budget cutbacks and downsizing of our force have made it imperative that the Army analyze future warfighting capabilities of the force by evaluating, identifying, and prioritizing "Critical" battlefield systems that best support the Army's "Vision of the Future Battlefield." TRADOC, as the architect of the future Army, has the responsibility to provide an organized, trained, and well-equipped modern force capable of maintaining the battlefield edge and to achieve Land Force Dominance as the Army transitions into the 21st century. A means of achieving this goal is the leveraging of technology and modernization of our future organizations, so necessary if we are to maintain the combat superiority we now enjoy. In the next few years, you will see a multitude of system upgrades and fieldings. Some of the materiel improvements are:*

**Digitization:** The application of information technologies to acquire, exchange, and employ digital information throughout the battlespace. Leverages digital technology and moves digital data between combat platforms by adding seamless connectivity foxhole to NCA. Digitization operationally enhances the situational awareness and force synchronization on the battlefield, while enhancing target acquisition and revolutionizing direct and indirect fires roles. Army objective to digitize brigade in FY 96 and division in FY 97.

**2d Generation FLIR:** This upgraded system will increase our capability of "Owning the Night" by maximizing the effective range of weapon systems, increasing the commander's situational awareness, and decreasing decision time to synchronize fire and maneuver. Along with the digitization effort, this initiative will increase our battlefield situational awareness and thus reduce fratricide.

**Asset Visibility Tracking:** This new Army distribution system will allow our forces to obtain asset visibility and maintain control of all containerized classes of supply. This will be accomplished by the use of radio frequency tags, automation, and satellite tracking to inventory cargo container contents and decrease manhours in locating specific critical classes of supply for the field (a major issue during ODS). It will allow In-Transit Visibility - Total Asset Visibility, a new capability of accurately tracking materiel from the factory to the foxhole, in support of force projection logistics. FUE to CONUS Contingency Corps FY 96.

**M113A3 (Upgrades):** These improvements will allow the M113 mobility matching the rest of the maneuver forces. Upgrades to the M113 consist of external fuel tanks, A3 Rise Power (engine and cross drive transmission upgrades), enhanced armor protection, ramp and belly armor, and improved driver controls. Funding for FP1 only; FUE FY 94.

**Commercial Space Package (CSP):** The concept behind the CSP is to field a limited, but affordable, near-term space support capability in each of our fielded corps and divisions, today. CSP is one of several initiatives in TRADOC intended to transition the Army into the 21st century. CSP consists of a commercial satellite and ground station networked to provide JTF/Army commanders with a robust communications, weather, and multi-spectral imaging capability. FUE FY 95.

**Highlights of other systems becoming fielded are:**

**Air Volcano:** A rapid scatterable mine dispensing air delivery system (Blackhawk). FUE FY 94.

**Kiowa Warrior:** Advanced Armed Reconnaissance Helicopter, capable of flying in day, night, and adverse weather; weapon systems consist of Hellfire Missiles, 2.75" rockets and .50 Cal MG. Fielding will be completed FY 98.

**M1A2 (Digitization):** Tactical information/graphics, increased speed and accuracy of information flow, increases combat effectiveness. FUE FY 96.

**Guardrail:** A precision radio frequency emitter locating system providing direct sensor to shooter linkage, to be fielded to aviation, artillery, and air defense in FY 95.

**SHF Tri-band Advanced Range Extension Satellite Terminal (STAR-T):** Highly mobile, globally deployable, C4I satellite terminal, which provides a highly reliable, multichannel, long-range integrated communication switching and transmission capability. FUE FY 99.

**Global Positioning System (GPS):** Space based POS/NAV system, provides accurate 3-dimensional position, velocity and time information, fielding of Precision Location Ground Receivers (PLGR) is ongoing. FUE FY 94.

**Digital Topographic Support System (DTSS):** Is being fielded now at division and corps to improve commanders' knowledge of terrain impacts on operations and to support IPB. Data is passed to brigade/battalion from division.

**Integrated Meteorological System (IMETS):** Fielded to Air Force Weather personnel stationed at corps and division to expedite and improve weather forecasting and weather decisions for commanders. Fielding begins FY 95.

**Longbow Apache:** The Longbow consists of a Multi-Millimeter Wave Fire Control Radar, Radio Frequency Interferometer and Longbow Hellfire missile. System provides a true fire-and-forget adverse weather capability. FUE is FY 97.



**Up-Armored HMMWV:** Vehicle will be produced in a Scout and a MP variant. System possesses increased ballistic protection against small arms fire, artillery airburst, small anti-personnel mines and unexploded artillery submunitions for the crew compartment. FUE FY 95.

**Paladin M109A6:** Self-locating, self-laying, onboard automated fire control, increased range with RAP, increased responsiveness, reliability, and survivability. FUE 4QFY 93 - complete fielding FY 99.

**M119A1 (Towed 105mm Howitzer):** Air transportable and air droppable lightweight, towed, howitzer with increased maneuverability and responsiveness. FUE FY 93 - with completion 4QTRFY 95.

**Advanced Field Artillery Tactical Data System (AFATDS):** A lightweight, distributed architecture computer network that provides command, control and fire direction functions for FA and coordination and planning functions for FS agencies. FUE FY 97.

**Joint Tactical Ground Station (JTAGS):** A transportable, in-theater element of the Tactical Event System (TES). Provides Theater Commander with capability to process and disseminate near real-time warning of tactical ballistic missile (TBM) launches. FUE FY 96.

**XM915/916 Dual Purpose Improved Conventional Munition (DPICM), 105mm Cartridge:** DPICM containing a submunition payload of 42 dual purpose XM80 submunitions with self-destruct fuze. XM915 is compatible with M119 Howitzers and XM916 is compatible with all 105mm Howitzers. FUE FY 96/IOC 4QTRFY 97.

**M4 Carbine:** Lightweight, air-cooled, 30-round magazine-fed weapon with collapsible buttstock. Eighty percent commonality of parts with M16A2. FUE FY 95.

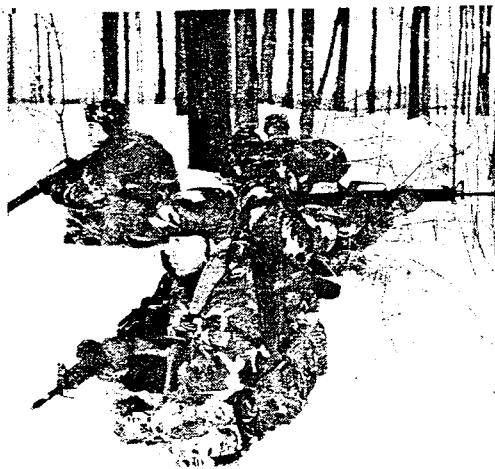
**120-mm Battalion Mortar System:** Will replace 4.2 inch mortar. Max range 7200 meters/min range 200 meters. System procured in two configurations, towed version (M120) and carrier version (M121) mounted in M1064. FUE (M120) 4QTRFY 93; FUE (M121) 3QTRFY 94.

**Javelin:** Man-portable medium antitank weapon/replaces dragon, integrated day optic/thermal sight; range > 2000; seeker is passive imaging infrared; missile lock-on before launch, fire-and-forget. FUE FY 96.

**NBC Biological Integrated Detector System (BIDS):** This BIO system will quickly and reliably detect and identify the presence of biological warfare agents. BIDS is included in a detector suite contained in a shelter mounted on a heavy HMMWV and is C-130 deployable. FUE 4QTRFY 96.

**Army PREPO Afloat (Pre-positioning of supplies and equipment afloat):** Includes sustainment supplies and equipment for a humanitarian effort, a heavy brigade, and is a component of the Army Strategic Mobility Program. Supplies include all classes needed to sustain deployed contingency corps units up to C+30. Humanitarian support ships provide watercraft, trucks, forklifts, cranes, container handlers, food, and shelter items. Heavy brigades ships have equipment and 15 days of sustainment supplies for 2 mechanized and 2 armor battalions. Heavy brigades ships will be on station by 4QTRFY 94.

# SOLDIER



*The Army's most valuable resource is the Soldier. Regardless of how superior our leadership, weapons, and technologies might be, it is the soldier who is the backbone of the Army. We are providing a comprehensive program to modernize the soldier as a battlefield system and to maximize warfighting capabilities by enhancing lethality, command and control, survivability, sustainment, and mobility. Some of the Army's modernization initiatives are addressed in the following three Soldier programs:*

**Varsity Suit:** A TRADOC initiative to provide every soldier his basic combat uniform and selected items of organizational equipment on a permanent basis. TRADOC schools will make initial issue upon graduation from advanced individual training (AIT)/one station unit training (OSUT). Concurrently, soldiers now in table of organization and equipment (TOE) units would retain the same items upon departure or permanent change of station. Soldiers now in table of distribution and allowance (TDA) assignments would receive their initial issue upon arrival at next TOE duty station. The proposal is now at HQDA pending decision by the Chief of Staff. (POC - Mr Stefaniw, DSN 680-3117/PROFS-STEFANII)

**Army Soldier Readiness Card:** Developed using credit card technology, it is an identification card designed to interface with the Standard Installation/Division Personnel System (SIDPERS), Theater Army Medical Management Information System (TAMMIS), Financial Battlefield System (FBS), TRANSCOM Medical Evacuation System, and Army Food Management Information System (AFMIS). The card will reduce redundant data input, increase data accuracy, and reduce the number of personnel performing those functions. (POC - MAJ Johnston, DSN 680-2539/PROFS-JOHNSTOA)

**Force Provider (FP):** A transportable complex designed to provide all required field services to soldiers. FP consists of kitchens, showers, laundries, environmentally controlled billets, latrines, and morale support items. Stored ready for use, one module can support approximately 550 soldiers/personnel. Other FP uses include humanitarian aid and disaster relief. One module is presently located at Ft. Bragg, North Carolina, and two interim support modules are located on pre-positioned ships. Two modules are scheduled for completion in FY 96, and will be located at

Ft. Bragg, North Carolina tentatively. Presently, funding exists for 9 of 36 planned modules.  
(POC - CPT Hamilton, DSN 680-3039/PROFS-HAMILTOA)

**Highlights of Enhanced Uniform/Individual Equipment initiatives soon to be fielded:**

**Laser Protective Visor** - double visor with two and three notch protection for aviator's helmet.

**SPH-4B General Purpose Aviator's Helmet** - product improvement with double laser visor and improved ballistic protection.

**Intermediate Cold-Wet Boot** - leather boot with GORTEX and thinsulate insert.

**Suit, Contamination Avoidance, Liquid Protection** - plastic coverall for short term extravehicular activity in contaminated environment.

**Communication/Aural Protection System** - helmet-compatible earmuffs with talk thru circuit and radio/intercom hookup.

**Extreme Cold Weather Sleep System** - all synthetic sleeping bag with stuffsack and cover for use down to -60 degrees F.

**Aircrew Battle Dress Uniform (Woodland)** - NOMEX BDU with woodland camouflage pattern.

**Aircrew Clothing System, Cold Weather** - multilayered NOMEX clothing system for aviators.

**Combat Chaplain's Kit** - improved nondenominational compact kit for use by chaplains in the field to support religious services.

**CVC Helmet Shell, Improved** - add on ballistic shell with protection equivalent to PASGT helmet.

**Compartmented Equipment Bag** - easy access zippered bag for carrying and storing CIE; issued in lieu of duffle bag to CVC.

**Aviator Auxiliary Lighting Devices** - finger light and lip light used for cockpit illumination when flying with night vision devices.

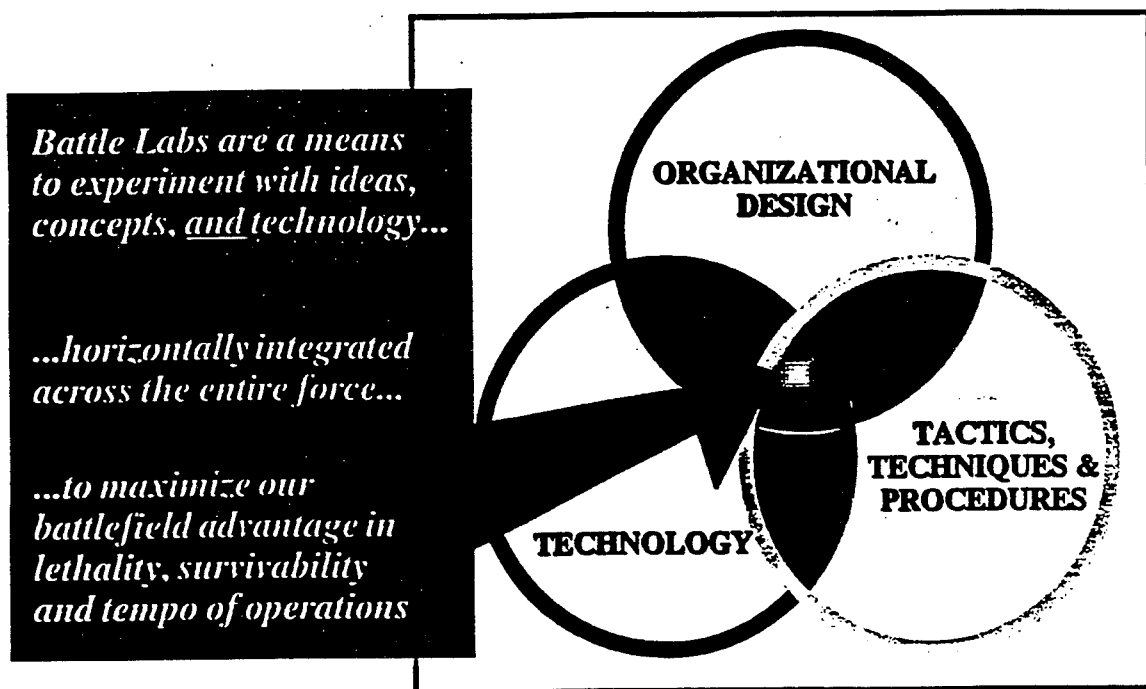
**Mounted Crewman's Glove** - Provides a flame resistant insulated glove with adequate tactility for crew member wear inside the vehicle/aircraft.

**Parachutist's Harness** - improved single point release device for the parachutist's combat load.

**Individual Water Purifier** - miniature reverse osmosis water pump for emergency individual use.

# BATTLE LABS

*Maximizing our soldiers' battlefield advantage by breaking paradigms*



Battle Labs are a United States Army Training and Doctrine Command (TRADOC) innovation to experiment with changing methods of warfare beginning with the battlefield dynamics and with soldiers and leaders as the center of focus.

The program was publicly announced in April 1992 and began in May 1992. The name is meant to convey the image of soldiers experimenting with warfighting concepts in order to generate battlefield insights.

Battle Labs conduct holistic appraisals of critical operational capability requirements needed to meet the changing nature of warfighting across all of the TRADOC domains—doctrine, training, leader development, organization design, materiel, and soldier systems. The appraisals are holistic in that they examine the needs of the entire combined arms and services team in a wide variety of relevant current and future scenarios. This, in turn, facilitates horizontally integrated requirements definition conducted concurrently with concept development which dramatically streamlines the entire process of fielding new capabilities.

Warfighting concepts generated from TRADOC Pamphlet 525-5, Future Full-Dimensional Operations, drive Battle Lab experiments. The experiments, labeled Advanced Warfighting Experiments (AWE), are progressive and iterative mixes of constructive, virtual and live simulations conducted with field soldiers and units in tactically competitive environments.

There are six Battle Labs.

The Early Entry Lethality and Survivability Battle Lab is at Ft. Monroe, Virginia.

The Mounted Battle Space Battle Lab is at Ft. Knox, Kentucky.

The Dismounted Battle Space Battle Lab is at Ft. Benning, Georgia.

The Depth and Simultaneous Attack Battle Lab is at Ft. Sill, Oklahoma.

The Battle Command Battle Lab has elements at Ft. Leavenworth, Kansas, Ft. Gordon, Georgia, and Ft. Huachuca, Arizona.

The Combat Service Support Battle Lab is at Ft. Lee, Virginia.

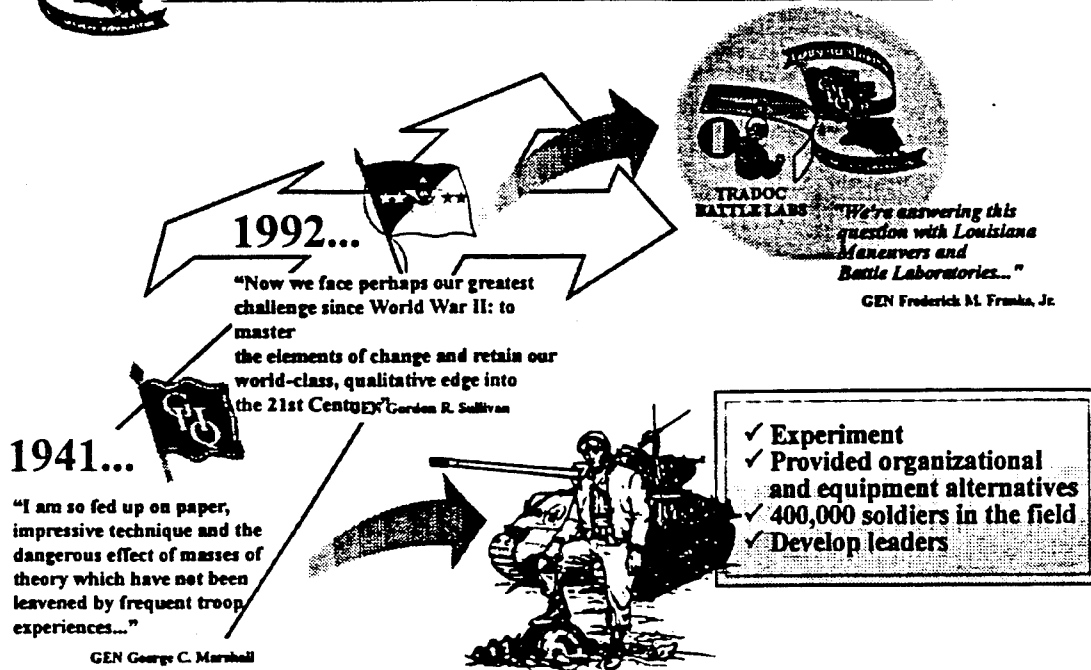
A Memorandum of Agreement between FORSCOM and TRADOC aligns designated units to each battle lab to facilitate experiments.

A Memorandum of Understanding between TRADOC and the Marine Corps Combat Development Command (MCCDC) ensures full participation by the USMC in appropriate Battle Lab experiments. Battle Labs have also established close ties with the Air Combat Command, Air Mobility Command, Military Sealift Command, Naval Doctrine Command, and several allied armies.

# LOUISIANA MANEUVERS



## Crossroads ...



GEN Sullivan looked at the situation facing the Army of the 1990's and realized there was a parallel with the situation that faced GEN Marshall in 1941. The reality GEN Marshall faced then ...

- Imminent entry into WWII.
- Growing resources.
- Large, untested Army.
- Difficulties with Congress, the Executive branch, and popular support.

Today's reality that GEN Sullivan faces, while differing in detail, is just as wrenching ...

- World's preeminent Army.
- New National Military Strategy ... Force Projection Army.
- Drawdown, declining resources.
- Ambiguous threat.

The tough challenge facing today's Army is meeting those realities while maintaining a strong and ready force. The Louisiana Maneuvers (LAM) of the 1990's provides the catalyst and focus for the difficult changes the Army is undergoing.



The Chief of Staff is the Director of LAM and the TRADOC Commander is the Deputy Director. The Army's senior leadership provides direct input into the new Louisiana Maneuvers through their membership in the Board of Directors (BoD), the governing body chaired by the CSA. By this mechanism the major concerns of the senior leadership receive the necessary attention and action.

Louisiana Maneuvers is a process ... a means to an end. Issues are approved by the BoD and proponents are assigned from MACOMs. Each proponent studies the assigned issue using available simulations ...

- Live (CTCs, FTXs).

- Constructive (computer models).

- Virtual (SIMNET is prime example).

The LAM process also incorporates lessons learned from real world operations. Basing their findings and recommendations on solid empirical evidence, the proponents assemble decision packages for their issues for the BoD, to whom they present courses of action. The BoD recommends a decision for each issue to the Chief of Staff for his approval and order for implementation.